

Work Order ID 132725

Thursday, May 07, 2015 2:57:13 PM

132725

Page 1

Item ID: D3529-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Bearpaw

Start Date: 5/7/2015 Start Qty: 4.00

4

Cust Item ID:

Required Date: 5/7/2015 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

CL

Date: MAR 08 2015

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3529	Rev A								

110

0.00

110

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

CUT BLANK AS PER FILE D3529-1BLANK

(6)φDL 15/05/12

120

0.00

120

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Inspect material for defects or damage prior to machining2-Machine as per Folio FA645 and Dwg D35293-Debur

(6)φ~~DL 15/05/12~~
JFL 2015-05-26

130

0.00

130

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

6φJFL 2015-05-26

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
Description Work Order Deviation			Disposition																		
			Completed By																		
			Lead hand / Supervisor Approval Verification																		
			QC / QA Coordinator Approval																		
Root Cause		FAULT CATEGORY																			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER : ☐																					

Work Order ID 132725

Thursday, May 07, 2015 2:57:13 PM

132725

Page 2

Item ID: D3529-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Bearpaw

Start Date: 5/7/2015

Start Qty: 4.00

4

Cust Item ID:

Required Date: 5/7/2015

Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

QC8- Inspect parts - second check

0.00

140

QC

Memo

0.00

Quality Control

150

Identify as per dwg & Stock Location:

0.00

150

Packaging

Memo

0.00

Packaging

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.00

Quality Control

WJP
15/05/27
DAS
20
9-89

6
DAS
27
9-89

MAY 28 2015

MLJ
MAY 28 2015

MLJ
MAY 28 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Thursday, May 07, 2015 2:57:12 PM

Page 1

Work Order ID: 132725

132725

Parent Item: D3529-1

D3529-1

Parent Item Name: Bearpaw

Start Date: 5/7/2015

Required Date: 5/7/2015

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A New Issue 06-06-28 JLM
IPP Rev:B New Manufacturing Method 08-11-27 Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

MUHMWB10

Purchased

No

100

sf

575.3420

1.265

6

MUHMWB10

DL 5/05/12

UHMW 1" Black - 48"x120" Tivar Mfg.#52480104

Location

Loc Qty

Loc Code

MAT

519.475

m131661

119.475

m132063

400

MAT018

55.867

m131335

55.867

132063

10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

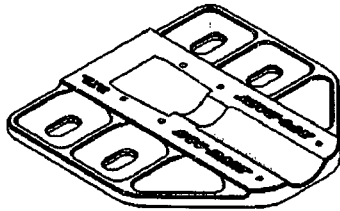
QA Closed: _____ Date: _____

Work Order update only ☐

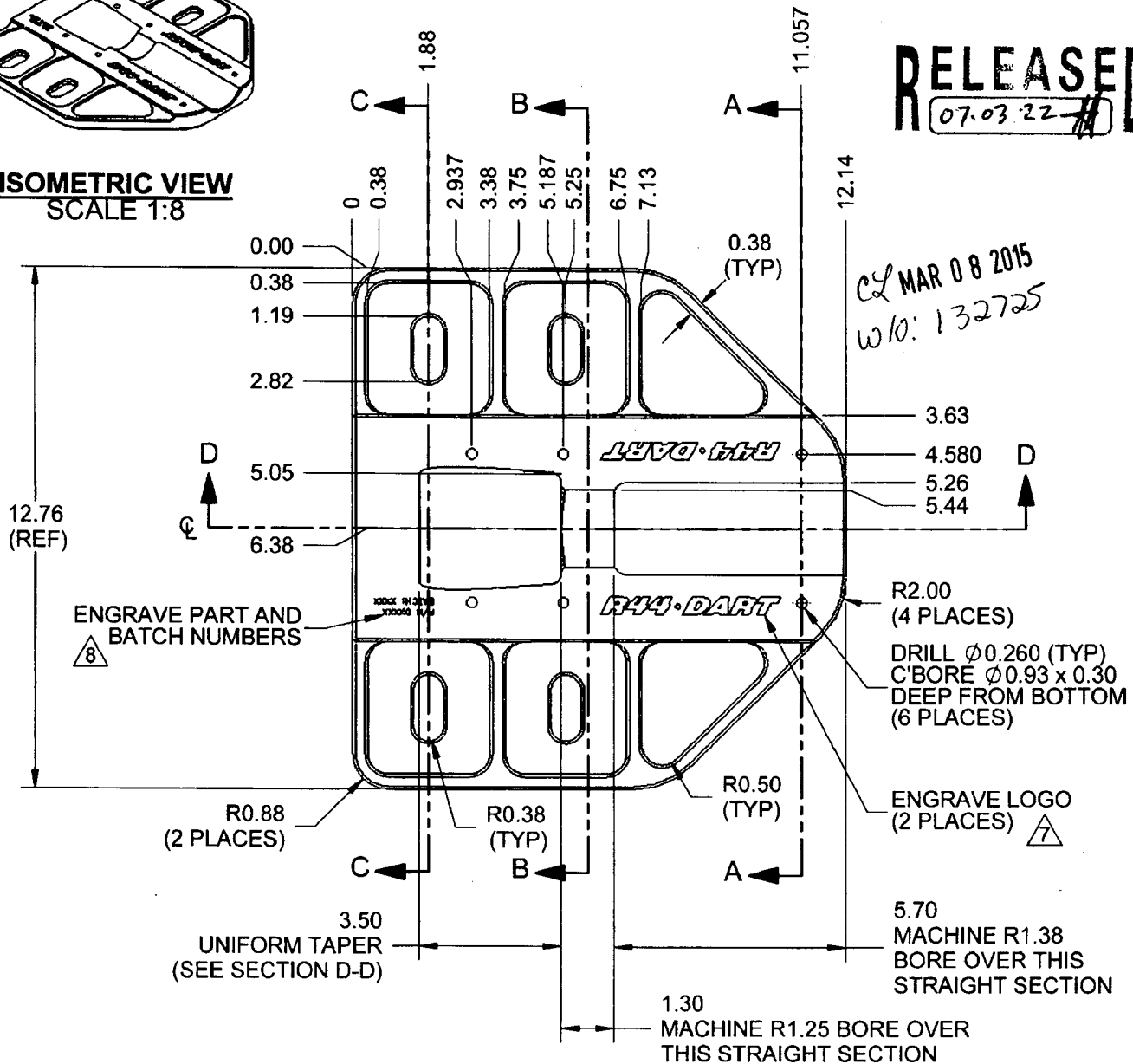
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OTHER : _____					

DART

DESIGN <i>CB</i>	DRAWN BY <i>CB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3529	REV. A SHEET 1 OF 2
DATE 07.01.04	TITLE R44 BEARPAW SCALE 1:4		
REV A	DATE 07.01.04	DESCRIPTION NEW ISSUE	



ISOMETRIC VIEW
SCALE 1:8



D3529-1 R44 BEARPAW

NOTES:

- 1) MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689, 1.00 THICK (MACHINE TO 0.950)
- 2) FINISH: NONE
- 3) PART IS SYMMETRIC ABOUT ϕ
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX
- 7) ENGRAVE LOGO TO MAX DEPTH OF 0.012 AT LOCATION SHOWN
- 8) ENGRAVE PART AND BATCH NUMBERS TO MAX DEPTH OF 0.010 AT LOCATION SHOWN

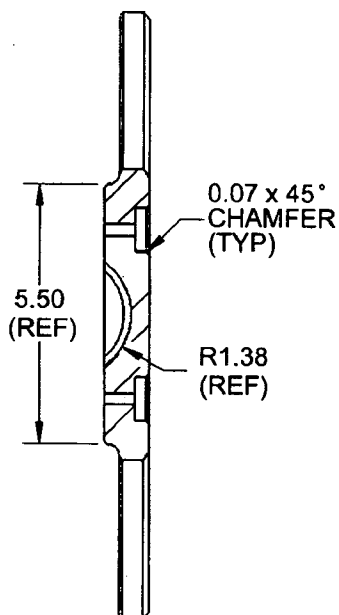
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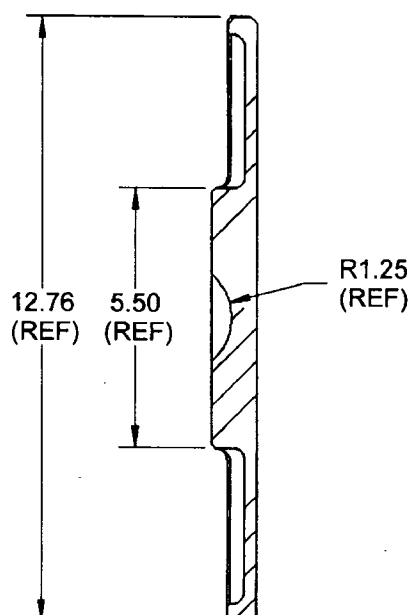


DESIGN CB	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
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DATE 07.01.04	TITLE R44 BEARPAW		SCALE 1:4

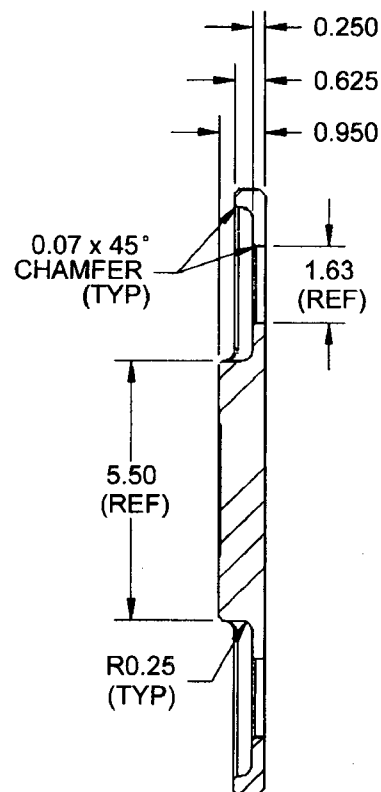
RELEASED
07.03.22



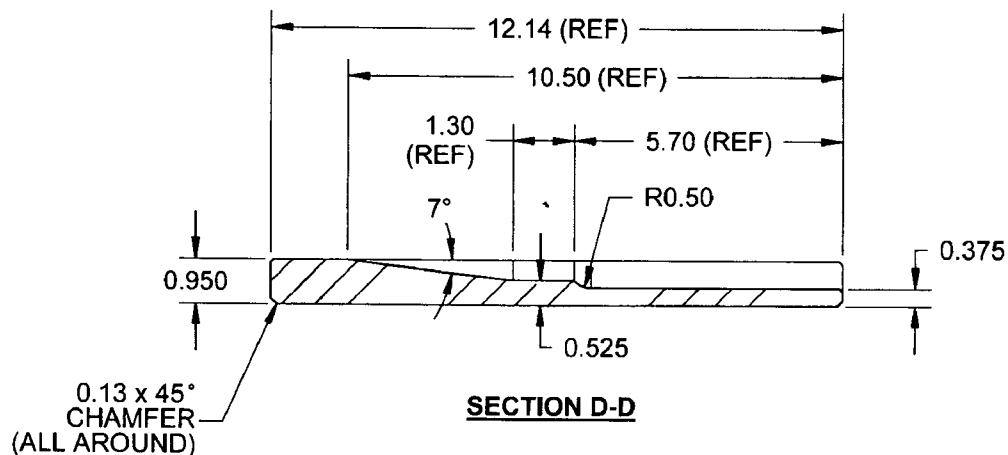
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

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DART AEROSPACE LTD		Work Order:	132725
Description: Bearpaw		Part Number:	D3529-1
Inspection Dwg: D3529 Rev: A		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	5.50	+/-0.030	5.500	✓		Caliper	JH-01
B	0.07 x 45°	+/-0.030 x 0.5°	0.063x45°	✓		"	"
C	R0.25	+/-0.030	R0.25	✓		rad 6	Shop
D	0.250	+/-0.010	0.259	✓		MIL-01	JH-02
E	0.625	+/-0.010	0.639	✓		Caliper	JH-01
F	0.950	+/-0.010	0.950	✓		"	"
G	1.63	+/-0.030	1.618	✓		"	"
H	12.14	+/-0.030	12.14	✓		tape	JH-06
I							
J	5.70	+/-0.030	5.70	✓		Caliper	JH-01
K	0.375	+/-0.010	0.384	✓		"	"
L	0.525	+/-0.010	0.535	✓		depth	118-120
M	0.13 x 45°	+/-0.030 x 0.5°	0.110	✓		depth	JFC-07
N	R0.50	+/-0.030	R0.50	✓		Rad 6	Shop
O	12.76	+/-0.030	12.76	✓		tape	JFC-06
P	3.38	+/-0.030	3.375	✓		Caliper	JH-01
Q	3.75	+/-0.030	3.755	✓		"	"
R	5.187	+/-0.010	5.1885	✓		"	"
S	5.25	+/-0.030	5.252	✓		"	"
T	7.13	+/-0.030	7.127	✓		"	"
U	Ø0.260	+0.006/-0.001	0.260	✓		"	"
V	0.30	+0.000/-0.030	0.315	✓		depth 6	JH-08
W	0.93	+/-0.030	0.930	✓		Caliper	JH-01
X	1.30	+/-0.030	1.30	✓		"	"

Measured by: JFC	Audited by: <i>[Signature]</i> DAS	Prototype Approval:	N/A
Date: 2015-05-26	Date: 15/05/27	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.05.01	New Issue	KJ/JLM	
B	08.05.06	Dimension I removed	KJ/DD <i>[Signature]</i>	<i>[Signature]</i>